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19305A GSRS MISSILE NUMBER 1055 ROUND NUMBER V-31.(U)  
MAY 79

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NO 1018  
MAY 1979

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METEOROLOGICAL DATA REPORT

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WFOU 14 20, 1968  
WFOU 14, 1-31  
15 MAY 1979

White Sands Meteorological Team

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AERONAUTIC SCIENCES LABORATORY  
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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REPORT DOCUMENTATION PAGE

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19305A GSRS, Missile No. 1055, Round No. V-31, are presented in tabular form.		

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# CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
MAP -----	2
TABLES	
1. Surface Observations Taken at 1442 MDT at LC-33 -----	3
2. Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 1441 MDT -----	4
3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, Taken at 1441 MDT -----	5
4. Pilot-Balloon-Measured Wind Data at 1442 MDT -----	6
5. SMR Significant Level Data at 1355 MST -----	7-8
6. SMR Upper Air Data at 1355 MST -----	9-13
7. SMR MRN Significant Levels at 1355 MST -----	14
8. SMR Mandatory Levels at 1355 MST -----	15
9. SMR MRN Mandatory Levels at 1355 MST -----	16

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## INTRODUCTION

19305A GSRS, Missile Number 1055, Round Number V-31, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1441 MDT, 25 May 1979. The scheduled launch time was 1430 MDT.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm}/\text{m}^3$ ), wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

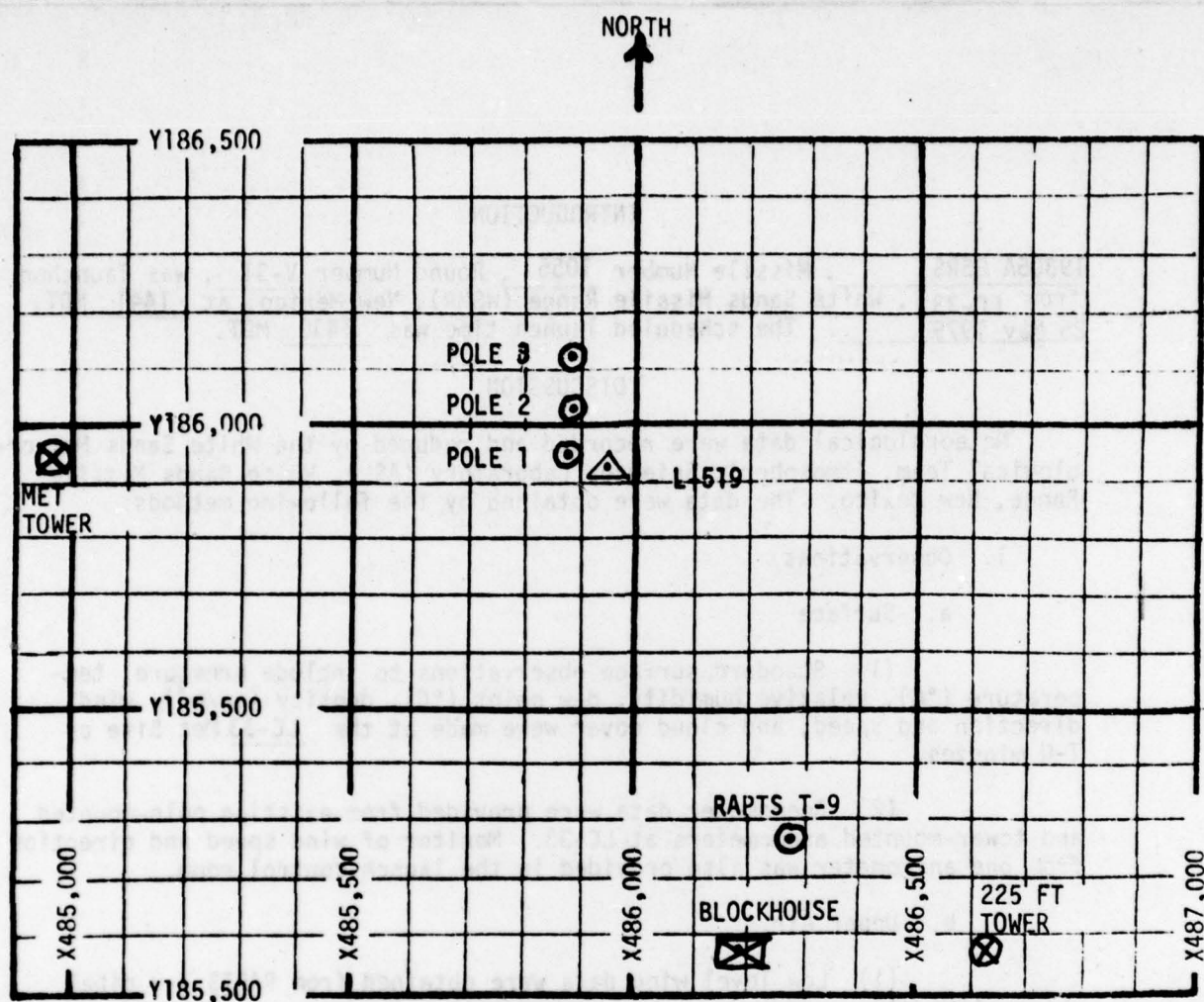
## SITE AND ALTITUDE

LC-33 330 meters (30-meter increments) 1441 MDT

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 100,500 feet in 500-foot increments.

## SITE AND TIME

SMR 1355 MST



1. MET TOWER - 4 Bendix Model T-120 Anemometers at 12 ft, 62 ft, 102 ft and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
  - (a) Pole #1 - 38.7 ft
  - (b) Pole #2 - 53.0 ft
  - (c) Pole #3 - 83.6 ft
3. 225 FT WIND TOWER - 5 Bendix Model T-120 Anemometers at 35 ft, 88 ft, 128 ft, 168 ft and 200 ft with 5 X-Y visual indicators in Blockhouse.
4. RAPTS T-9 - Radar Automatic Pilot-Balloon Tracking System T-9 Radar



TABLE 1. SURFACE OBSERVATIONS TAKEN AT 1442 MDT,  
25 MAY 1979 AT LC-33, 19305A GSRS,  
MISSILE NO. 1055, ROUND NO. V-31

ELEVATION	3977.30	FT/MSL
PRESSURE	880.9	MBS
TEMPERATURE	28.0	°C
RELATIVE HUMIDITY	50	%
DEW POINT	16.5	°C
DENSITY	1009	GM/M <sup>3</sup>
WIND SPEED	04	MPH
WIND DIRECTION	090	DEGREES
CLOUD COVER	2	Cu
CLOUD COVER	4	Cs



TABLE 2. LC-33 FIXED POLE ANEMOMETER-MEASURED WINDS

POLE #1			POLE #2			POLE #3		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	000	00	-30	M	M	-30	M	M
-20	000	00	-20	M	M	-20	M	M
-10	000	00	-10	154	03	-10	000	00
0.0	000	00	0.0	157	02	0.0	000	00
+10	000	00	+10	170	02	+10	000	00

Type 19305A GSRS, Missile No. 1055, Round No. Y-31 launched  
from LC-33 on 25 May 1979 at 1441 MDT.

POLE #1 = X485,874.29 Y185,958.90 H4018.74 33.7 ft. AGL

POLE #2 = X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL

POLE #3 = X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL

NOTE: Wind directions are referenced to the firing azimuth \_\_\_\_\_  
or true north true north.

TABLE 3. LC-33 METEOROLOGICAL TOWER ANEMOMETER-MEASURED WINDS (202 FT. TOWER)

LEVEL #1 12 ft.			LEVEL #2 62 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	M	M	-30	M	M
-20	M	M	-20	M	M
-10	009	04	-10	052	02
0.0	008	04	0.0	031	03
+10	360	02	+10	024	02
LEVEL #3 102 ft.			LEVEL #4 202 ft.		
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH
-30	M	M	-30	M	M
-20	M	M	-20	M	M
-10	000	00	-10	000	00
0.0	000	00	0.0	072	01
+10	000	00	+10	060	02

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19305A GSRS, Missile No. 1055, Round No. V-31 launched  
from LC-33 on 25 May 1979 at 1441 MDT.

NOTE: Wind directions are referenced to the firing azimuth  
or true north true north.

TABLE 4. PILOT-BALLOON-MEASURED WIND DATA (30-METER INCREMENTS)

HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH	HEIGHT METERS AGL	DIRECTION DEGREES	SPEED MPH
SFC	Calm	Calm	390		
30	205	4.0	420		
60	168	8.5	450		
90	130	9.5	480		
120	182	10.0	510		
150	190	10.0	540		
180	178	7.5	570		
210	144	7.0	600		
240	148	6.0	630		
270	151	9.5	660		
300	156	10.5	690		
330	153	8.5	720		
360			750		

Release Point Coordinates (WSTM): X486,037.24 Y486,037.24 H3977.30

Released from LC-33 on 25 May 1979 at 1442 MDT.Type 19305A GSRS, Missile No. 1055, Round No. V-31 launched  
from LC-33 on 25 May 1979 at 1441 MDT.NOTE: Wind directions are referenced to the firing azimuth  
or true north true north.



STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 150

SIGNIFICANT LEVEL DATA  
1450060150  
S M R

GEODETIC COORDINATES  
32.40034 LAT DEG  
106.42307 LONG DEG

PRESSURE	GEOMETRIC ALTITUDE	TEMPERATURE	REL. HUM.
MILLIBARS	MSL FEET	AIR DEWPOINT DEGREES CENTIGRADE	PERCENT
878.1	3297.3	25.0	34.0
850.0	4928.3	21.0	45.0
810.2	6282.5	16.9	55.0
770.2	7692.1	12.6	74.0
760.4	8046.0	12.2	52.0
721.8	9476.2	9.3	57.0
700.0	10309.6	7.1	57.0
684.2	10225.3	5.5	72.0
665.4	11673.4	4.0	54.0
636.6	12851.9	1.5	81.0
583.4	15142.4	-4.0	59.0
570.5	15722.4	-4.3	27.0
549.2	16700.9	-5.0	25.0
500.0	19106.4	-10.8	41.0
429.8	22869.7	-19.5	61.0
400.0	24614.9	-23.0	47.0
374.8	25957.6	-25.8	33.0
352.4	27630.6	-29.3	20.0
326.2	29428.4	-34.3	20.0
300.0	31335.9	-39.5	
260.2	34464.4	-43.1	
250.0	35349.5	-49.7	
222.4	37937.1	-55.8	
212.2	38813.0	-57.5	
207.2	39315.9	-56.0	
206.0	40057.3	-55.9	
183.4	41860.5	-59.2	
174.4	42901.5	-58.5	
161.4	44497.3	-61.0	
150.0	45993.2	-61.0	
137.0	47041.2	-64.3	
133.2	48411.5	-62.2	
125.6	49580.4	-60.7	
100.0	54273.3	-62.4	
87.0	57101.5	-63.7	
75.6	59912.9	-60.6	
70.0	61353.8	-59.4	
65.2	63017.9	-60.7	
60.0	64739.0	-57.5	
53.0	67318.4	-59.0	

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STATION ALTITUDE 997.30 FEET MSL  
 25 MAY 79 1355 HRS MST  
 ASCENSION NO. 100

SIGNIFICANT LEVEL DATA  
 1450060150  
 S M R

GEODETIC COORDINATES  
 32.40034 LAT DEG  
 106.42307 LON DEG

PRESSURE	GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT
50.0	68532.4	-56.7	
39.0	73771.0	-54.0	
34.6	76338.1	-49.4	
30.0	79433.5	-48.9	
21.9	86317.2	-46.0	
20.0	88332.2	-42.3	
13.0	98048.2	-39.0	
11.6	100657.3	-35.5	

STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 130

UPPER AIR DATA  
1450050150  
S M R

GEODETTIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	WIND DATA		INDEX OF REFRACTION
					DIRECTION, DEGREES(TN)	SPEED KNOTS	
3997.3	878.1	25.0	34.0	1021.2	0	0	1.000274
4000.0	878.0	25.0	34.0	1021.2	151.0	0	1.000274
4500.0	852.8	22.8	30.9	1010.5	151.0	1.4	1.000273
5000.0	847.8	20.8	45.5	999.6	151.0	2.8	1.000272
5500.0	833.0	19.3	49.2	987.4	151.0	4.2	1.000269
6000.0	818.3	17.8	52.9	975.1	151.0	5.6	1.000266
6500.0	803.9	16.2	57.9	962.9	149.0	6.4	1.000263
7000.0	789.6	14.7	64.7	950.0	147.2	6.9	1.000261
7500.0	775.3	13.2	71.4	938.0	150.9	7.5	1.000259
8000.0	761.7	12.9	54.9	924.0	170.5	8.3	1.000244
8500.0	747.9	11.8	53.6	911.1	150.7	9.4	1.000238
9000.0	734.4	10.5	55.3	898.7	100.2	10.7	1.000233
9500.0	721.2	9.2	57.3	886.5	193.5	12.0	1.000229
10000.0	708.0	7.9	63.3	874.4	199.0	13.8	1.000227
10500.0	695.1	6.6	68.5	862.4	204.7	15.8	1.000225
11000.0	682.3	5.4	70.2	850.5	205.5	16.5	1.000220
11500.0	669.7	4.3	58.2	838.4	205.5	17.0	1.000211
12000.0	657.3	3.3	61.5	826.0	201.5	15.5	1.000208
12500.0	645.1	2.2	72.9	813.5	195.7	14.2	1.000207
13000.0	633.0	1.1	80.2	801.4	155.6	13.6	1.000205
13500.0	621.1	.1	77.3	789.3	177.1	13.7	1.000200
14000.0	609.4	-1.3	75.0	776.7	171.0	14.2	1.000195
14500.0	597.9	-2.5	72.4	767.0	173.1	14.0	1.000190
15000.0	585.6	-3.7	59.7	756.7	173.1	13.6	1.000186
15500.0	575.4	-4.2	43.1	744.3	187.5	14.3	1.000176
16000.0	564.4	-4.5	26.4	731.3	194.5	15.5	1.000169
16500.0	553.0	-4.9	25.4	718.3	199.0	17.1	1.000166
17000.0	542.9	-5.7	27.0	706.7	200.7	17.2	1.000163
17500.0	532.4	-6.9	30.3	690.1	201.2	17.0	1.000161
18000.0	522.1	-8.1	33.6	685.7	201.2	16.6	1.000159
18500.0	512.0	-9.3	37.0	675.5	202.9	16.6	1.000157
19000.0	502.1	-10.5	40.3	665.5	203.8	16.9	1.000154
19500.0	492.2	-11.7	43.1	655.2	200.0	16.4	1.000152
20000.0	482.4	-12.9	45.7	645.1	203.1	15.8	1.000150
20500.0	472.8	-14.0	49.4	635.1	202.0	15.7	1.000147
21000.0	463.4	-15.2	51.1	625.2	201.2	15.8	1.000145
21500.0	454.1	-16.3	53.7	615.5	203.7	16.0	1.000142
22000.0	445.1	-17.5	56.4	600.0	209.0	15.2	1.000140
22500.0	430.2	-18.6	57.0	580.7	213.7	16.5	1.000138
23000.0	427.5	-19.8	50.0	537.3	220.2	17.1	1.000135

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STATION ALTITUDE 997.30 FEET MSL  
25 MAY 79  
ASCENSION NO. 130

UPPER AIR DATA  
1450060150  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN) SPEED KNOTS	INDEX OF REFRACTION
23500.0	418.8	-20.3	55.9	577.7	619.1	224.0	1.000133
24000.0	410.3	-21.3	51.9	568.2	617.8	226.8	1.000130
24500.0	401.9	-22.6	47.9	558.9	616.0	230.1	1.000127
25000.0	393.6	-23.9	42.7	549.9	615.2	233.8	1.000125
25500.0	385.3	-25.0	37.0	541.0	613.8	229.5	1.000122
26000.0	377.5	-26.1	32.0	532.2	612.4	224.2	1.000120
26500.0	369.0	-27.1	28.3	523.2	611.2	220.4	1.000118
27000.0	361.9	-28.1	24.6	514.3	610.0	219.5	1.000115
27500.0	354.3	-29.3	21.0	505.6	608.7	221.1	1.000113
28000.0	346.9	-30.3	20.0	497.6	607.1	221.7	1.000111
28500.0	339.3	-31.7	20.0	489.8	605.4	221.6	1.000110
29000.0	332.3	-33.1	20.0	482.2	603.8	219.3	1.000108
29500.0	325.2	-34.5	19.2**	474.6	601.9	216.1	1.000106
30000.0	318.1	-35.9	14.0**	467.0	600.1	213.7	1.000104
30500.0	311.2	-37.2	8.8**	459.5	598.4	211.4	1.000102
31000.0	304.5	-38.6	3.5**	452.2	596.7	211.3	1.000101
31500.0	297.8	-39.9		444.8	594.9	211.0	1.000099
32000.0	291.1	-41.3		437.5	593.2	208.0	1.000097
32500.0	284.5	-42.7		430.2	591.4	205.2	1.000095
33000.0	278.3	-44.0		423.1	589.7	204.1	1.000094
33500.0	272.0	-45.4		416.1	587.9	203.2	1.000093
34000.0	266.0	-46.8		409.3	586.1	203.1	1.000091
34500.0	260.0	-48.1		402.5	584.4	202.0	1.000090
35000.0	254.1	-49.1		395.0	582.2	198.1	1.000088
35500.0	248.5	-50.1		387.6	581.9	193.4	1.000086
36000.0	242.5	-51.3		380.7	580.3	187.4	1.000085
36500.0	236.8	-52.5		374.0	578.7	184.1	1.000083
37000.0	231.3	-53.7		367.3	577.1	184.2	1.000082
37500.0	226.0	-55.0		360.8	575.4	187.0	1.000080
38000.0	220.7	-56.1		354.1	574.0	194.9	1.000079
38500.0	215.3	-56.9		347.2	572.8	200.0	1.000077
39000.0	210.4	-57.0		339.0	572.0	203.3	1.000075
39500.0	205.4	-58.0		329.5	574.1	203.4	1.000073
40000.0	200.5	-59.9		321.0	574.2	203.0	1.000072
40500.0	195.8	-56.7		315.1	573.1	203.4	1.000070
41000.0	191.1	-57.5		309.0	571.9	212.2	1.000069
41500.0	186.2	-58.5		302.9	570.7	210.2	1.000067
42000.0	182.2	-59.1		296.5	570.0	220.5	1.000066
42500.0	177.8	-58.8		289.0	570.4	225.8	1.000064
43000.0	173.0	-58.7		281.9	570.0	230.7	1.000063

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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STATION ALTITUDE 3997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 150

UPPER AIR DATA  
1450000150  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES	DEWPOINT CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (T.)	SPEED KNOTS	INDEX OF REFRACTION
42500.0	169.4	-59.4			276.1	569.5	234.3	42.4	1.000061
44000.0	165.3	-60.2			270.5	568.5	236.9	46.6	1.000060
45500.0	161.4	-61.0			265.0	567.4	239.8	48.4	1.000059
47000.0	157.5	-61.0			258.6	567.4	243.9	46.5	1.000058
48500.0	153.7	-61.0			252.4	567.4	248.2	44.1	1.000056
50000.0	150.0	-61.0			246.3	567.4	252.4	39.7	1.000055
51500.0	146.3	-61.9			241.3	566.2	257.2	35.5	1.000054
53000.0	142.8	-62.8			236.5	565.0	255.6	30.9	1.000053
54500.0	139.3	-63.7			231.7	563.8	253.9	26.4	1.000052
56000.0	135.9	-63.7			226.1	563.8	249.8	24.3	1.000050
57500.0	132.6	-62.1			218.9	563.0	245.0	22.5	1.000049
59000.0	129.4	-61.4			213.0	560.6	246.2	19.1	1.000047
60500.0	126.3	-60.8			207.2	567.7	257.5	15.4	1.000046
62000.0	123.2	-60.9			202.2	567.0	260.3	12.9	1.000045
63500.0	120.3	-61.0			197.5	567.4	271.1	11.4	1.000044
65000.0	117.4	-61.2			192.9	567.1	272.1	10.3	1.000043
66500.0	114.5	-61.4			188.4	566.9	254.8	10.7	1.000042
68000.0	111.8	-61.6			184.0	566.7	259.8	11.9	1.000041
69500.0	109.1	-61.8			179.7	566.4	243.0	12.6	1.000040
71000.0	106.4	-61.9			175.5	566.2	247.1	13.3	1.000039
72500.0	103.9	-62.1			171.4	565.9	255.2	14.2	1.000038
74000.0	101.3	-62.3			167.4	565.7	267.4	15.6	1.000037
75500.0	98.9	-62.5			163.5	565.4	270.0	16.4	1.000036
77000.0	96.5	-62.7			159.7	565.1	283.7	14.7	1.000036
78500.0	94.1	-63.0			156.0	564.8	293.3	13.2	1.000035
80000.0	91.8	-63.2			152.4	564.5	300.3	11.5	1.000034
81500.0	89.6	-63.4			148.9	564.2	323.1	10.5	1.000033
83000.0	87.4	-63.7			145.4	563.9	332.4	10.4	1.000032
84500.0	85.3	-63.3			141.6	564.4	333.4	10.5	1.000032
86000.0	83.3	-62.7			137.8	563.1	333.5	10.5	1.000031
87500.0	81.2	-62.2			134.1	563.9	327.4	10.4	1.000030
89000.0	79.3	-61.6			130.5	560.0	321.2	10.4	1.000029
90500.0	77.3	-61.1			127.0	567.4	321.3	9.6	1.000028
92000.0	75.3	-60.5			123.7	560.1	323.9	8.4	1.000028
93500.0	73.7	-60.2			120.5	566.5	330.0	7.3	1.000027
95000.0	71.9	-59.8			117.4	569.0	322.0	6.6	1.000026
96500.0	70.2	-59.4			114.4	567.3	312.0	6.1	1.000025
98000.0	68.5	-59.0			111.8	567.0	302.1	6.2	1.000025
99500.0	66.9	-60.2			109.4	568.3	273.3	6.7	1.000024
100000.0	65.3	-60.7			107.0	567.9	267.1	7.3	1.000024



GEODETIC COORDINATES  
32.42034 LAT DEG  
106.42307 LONG DEG

UPPER AIR DATA  
1450060150  
S M R

STATION ALTITUDE 997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 100

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, DEGREES (T)	SPEED KNOTS	INDEX OF REFRACTION
03500.0	63.7	-59.8		104.0	569.0	297.0	6.6	1.000023
04000.0	62.2	-58.9		101.1	570.3	300.9	6.1	1.000023
04500.0	60.7	-57.9		98.3	571.5	320.7	6.6	1.000022
05000.0	59.3	-57.7		95.8	571.9	329.0	7.9	1.000021
05500.0	57.8	-57.9		93.5	571.5	334.7	9.3	1.000021
06000.0	56.5	-58.2		91.5	571.1	350.7	8.2	1.000020
06500.0	55.1	-58.5		89.5	570.7	21.4	8.6	1.000020
07000.0	53.8	-58.8		87.5	570.4	41.0	9.5	1.000019
07500.0	52.5	-58.7		85.3	570.6	57.7	10.0	1.000019
08000.0	51.3	-57.7		82.9	571.8	71.6	11.3	1.000018
08500.0	50.1	-56.8		80.6	573.1	79.9	9.7	1.000018
09000.0	48.9	-56.5		78.0	573.5	90.9	7.2	1.000018
09500.0	47.8	-56.2		76.7	573.6	110.0	5.4	1.000017
10000.0	46.6	-55.9		74.6	574.2	114.1	6.6	1.000017
10500.0	45.5	-55.7		73.0	574.5	117.0	7.8	1.000016
11000.0	44.3	-55.4		71.2	574.8	110.7	8.5	1.000016
11500.0	43.4	-55.2		69.4	575.2	113.3	6.6	1.000015
12000.0	42.4	-54.9		67.7	575.5	110.0	6.7	1.000015
12500.0	41.4	-54.7		66.0	575.9	99.0	8.6	1.000015
13000.0	40.5	-54.4		64.4	576.2	80.3	8.8	1.000014
13500.0	39.3	-54.1		62.8	576.3	70.2	9.3	1.000014
14000.0	38.6	-53.6		61.2	577.3	73.4	9.9	1.000014
14500.0	37.7	-52.7		59.6	578.4	71.0	10.6	1.000013
15000.0	36.8	-51.6		58.0	579.6	65.0	12.5	1.000013
15500.0	36.0	-50.9		56.4	580.8	50.0	15.9	1.000013
16000.0	35.1	-50.0		54.9	582.0	54.4	19.3	1.000012
16500.0	34.3	-49.4		53.5	582.6	54.1	20.3	1.000012
17000.0	33.6	-49.3		52.2	582.9	54.2	20.8	1.000012
17500.0	32.8	-49.2		51.0	583.0	54.4	21.3	1.000011
18000.0	32.0	-49.1		49.8	583.1	57.5	18.0	1.000011
18500.0	31.3	-49.1		48.7	583.2	62.1	14.7	1.000011
19000.0	30.5	-49.0		47.6	583.3	65.2	11.7	1.000011
19500.0	29.9	-48.9		46.5	583.4	70.0	11.9	1.000010
20000.0	29.2	-48.7		45.4	583.7	82.0	12.2	1.000010
20500.0	28.6	-48.5		44.3	584.0	90.3	12.7	1.000010
21000.0	27.9	-48.2		43.3	584.3	90.4	13.2	1.000009
21500.0	27.3	-48.0		42.2	584.5	92.3	13.8	1.000009
22000.0	26.7	-47.8		41.2	584.5	93.7	14.3	1.000009
22500.0	26.1	-47.6		40.3	585.1	92.4	14.7	1.000009
23000.0	25.5	-47.4		39.3	585.3	91.2	15.1	1.000009

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

UPPER AIR DATA  
1450060150  
S M P

STATION ALTITUDE 997.30 FEET MSL  
25 MAY 79 1355 HRS MST  
ASCENSION NO. 100

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC CMETER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION, SPEED DEGREES(TK) KNOTS	INDEX OF REFRACTION
83500.0	24.9	-47.2		38.4	565.0	91.1	1.000009
84000.0	24.5	-47.0		37.5	565.9	94.6	1.000008
84500.0	23.8	-46.8		36.6	565.4	95.2	1.000008
85000.0	23.3	-46.9		35.8	560.4	101.0	1.000008
85500.0	22.7	-46.3		34.9	560.7	104.1	1.000008
86000.0	22.2	-46.1		34.1	567.0	107.0	1.000008
86500.0	21.7	-45.7		33.3	567.6	110.4	1.000007
87000.0	21.2	-44.7		32.4	568.6	117.8	1.000007
87500.0	20.8	-43.8		31.5	590.0	125.5	1.000007
88000.0	20.3	-42.9		30.7	591.1	133.0	1.000007
88500.0	19.9	-42.2		29.9	592.0	136.3	1.000007
89000.0	19.4	-42.1		29.3	592.2	142.9	1.000007
89500.0	19.0	-41.9		28.6	592.4	147.8	1.000006
90000.0	18.6	-41.7		28.0	592.0	149.0	1.000006
90500.0	18.2	-41.6		27.3	592.9	145.5	1.000006
91000.0	17.8	-41.4		26.7	593.1	130.5	1.000006
91500.0	17.4	-41.2		26.1	593.3	128.7	1.000006
92000.0	17.0	-41.1		25.5	593.5	115.7	1.000006
92500.0	16.6	-40.9		24.9	593.7	103.6	1.000006
93000.0	16.3	-40.7		24.4	593.9	93.3	1.000005
93500.0	15.9	-40.5		23.8	594.2	93.0	1.000005
94000.0	15.6	-40.4		23.3	594.4	90.6	1.000005
94500.0	15.2	-40.2		22.8	594.8	91.6	1.000005
95000.0	14.9	-40.0		22.2	594.8	93.2	1.000005
95500.0	14.6	-39.9		21.7	593.0	96.8	1.000005
96000.0	14.2	-39.7		21.2	595.2	99.4	1.000005
96500.0	13.9	-39.5		20.8	595.5	101.7	1.000005
97000.0	13.6	-39.4		20.3	595.7	90.6	1.000005
97500.0	13.3	-39.2		19.8	595.9	91.1	1.000004
98000.0	13.0	-39.0		19.4	590.1	60.7	1.000004
98500.0	12.7	-38.4		18.9	596.2		1.000004
99000.0	12.5	-37.7		18.5	597.3		1.000004
99500.0	12.2	-37.1		18.0	598.0		1.000004
100000.0	11.9	-36.4		17.6	599.3		1.000004
100500.0	11.7	-35.7		17.1	600.3		1.000004

STATION ALTITUDE 3997.30 FEET MSL  
 25 MAY 79 1355 HRS MST  
 ASCENSION NO. 150

MRM SIGNIFICANT LEVEL DATA  
 1450060150  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE DECEMETERS	DIRECTION DEG (TH)	SPEED KPS	WIND DATA	N-S KPS	E-W KPS	DEW PT DE DEG C	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
3052.	9999.**	9999.**	-9999.**	-9999.**	-9999.**	99	-35.5	1.160+1
2973.	86.	8.	8.	-1.	-0.	99	-39.0	1.300+1
2680.	127.	6.	6.	4.	-4.	99	-42.3	2.000+1
2619.	109.	6.	6.	2.	-0.	99	-46.0	2.190+1
2411.	75.	6.	6.	-2.	-0.	99	-48.9	3.000+1
2317.	54.	10.	10.	-6.	-0.	99	-49.4	3.460+1
2240.	75.	5.	5.	-1.	-5.	99	-54.0	3.900+1
2081.	60.	5.	5.	-1.	-5.	99	-56.7	5.000+1
2044.	52.	5.	5.	-3.	-4.	99	-59.0	5.300+1
1960.	325.	4.	4.	-3.	-4.	99	-57.5	6.000+1
1914.	287.	4.	4.	-1.	4.	99	-60.7	6.520+1
1870.	311.	3.	3.	-2.	2.	99	-59.4	7.000+1
1820.	325.	4.	4.	-4.	3.	99	-60.6	7.580+1
1735.	333.	5.	5.	-5.	2.	99	-63.7	8.700+1
1649.	273.	9.	9.	-0.	9.	99	-62.4	1.000+2

14

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.



STATION ALTITUDE 3997.30 FEET MSL  
 25 MAY 79 1355 HRS MST  
 ASCENSION NO. 150

MANDATORY LEVELS  
 1450060150  
 S M R

GEODETIC COORDINATES  
 32.4034 LAT DEG  
 106.42307 LON DEG

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEW POINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	4925.	21.0	8.6	45.	151.0	2.6
800.0	6032.	15.8	8.0	60.	149.1	0.6
750.0	8418.	11.9	2.0	55.	179.3	9.2
700.0	10259.	7.1	1.4	67.	202.9	15.0
650.0	12285.	2.7	-2.0	60.	190.6	14.7
600.0	14304.	-2.2	-6.4	75.	172.3	14.1
550.0	16646.	-5.0	-21.9	25.	200.4	17.3
500.0	19080.	-10.8	-21.4	41.	206.4	10.9
450.0	21707.	-16.9	-23.7	55.	205.3	10.1
400.0	24574.	-23.0	-31.1	47.	230.8	10.2
350.0	27741.	-29.7	-45.4	20.	221.7	24.9
300.0	31274.	-39.5			211.3	24.0
250.0	35272.	-49.7			195.5	23.8
200.0	39961.	-53.9			200.9	20.8
175.0	42722.	-58.5			229.0	30.7
150.0	45674.	-61.0			252.2	39.9
125.0	49569.	-60.7			262.2	14.1
100.0	54106.	-62.4			272.1	10.5
80.0	58614.	-61.8			324.0	10.4
70.0	61342.	-59.4			311.8	0.1
60.0	64507.	-57.5			324.5	7.1
50.0	68274.	-56.7			79.0	9.7
40.0	72942.	-54.3			21.5	9.0
30.0	79023.	-42.9			74.0	11.6
25.0	83017.	-47.2			90.4	13.4
20.0	87916.	-42.3			130.4	11.3
15.0	94329.	-40.1			92.1	0.5

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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STATION ALTITUDE 3997.30 FEET MSL  
 25 MAY 79 1355 HRS MST  
 ASCENSION NO. 130

MRN MANDATORY LEVELS  
 1450060150  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

GEOPOTENTIAL ALTITUDE METERS	DIRECTION DEG (TN)	WIND DATA		L-W MPS	DEW PT D-P DEG C	TEMPERATURE		PRESSURE MILLIBARS
		SPEED MPS	N-S MPS			AIR DEG C		
2875.	92.	4.	0.	-4.	99	-40.1	1.500+1	
2880.	136.	6.	4.	-4.	99	-42.3	2.000+1	
2931.	90.	6.	0.	-8.	99	-47.2	2.500+1	
2411.	75.	6.	-2.	-6.	99	-48.9	3.000+1	
2223.	81.	5.	-1.	-5.	99	-54.3	4.000+1	
2081.	80.	5.	-1.	-5.	99	-56.7	5.000+1	
1960.	324.	4.	-3.	-2.	99	-57.5	6.000+1	
1870.	312.	3.	-2.	-4.	99	-59.4	7.000+1	
1787.	324.	5.	-4.	3.	99	-61.8	8.000+1	
1649.	272.	6.	-0.	0.	99	-62.4	1.000+2	
1511.	262.	7.	1.	7.	99	-60.7	1.250+2	
1398.	252.	21.	6.	20.	99	-61.0	1.500+2	
1302.	229.	19.	12.	14.	99	-58.5	1.750+2	
1216.	207.	14.	12.	0.	99	-55.9	2.000+2	
1075.	195.	12.	12.	3.	99	-49.7	2.500+2	
953.	211.	13.	11.	6.	99	-39.5	3.000+2	
840.	222.	9.	10.	7.	10	-29.7	3.500+2	
749.	231.	8.	7.	4.	00	-23.0	4.000+2	
662.	205.	9.	6.	4.	07	-16.9	4.500+2	
582.	206.	9.	8.	3.	11	-10.8	5.000+2	
507.	200.	7.	7.	-1.	17	-5.0	5.500+2	
439.	172.	8.	7.	2.	04	-2.2	6.000+2	
374.	199.	8.	7.	0.	05	2.7	6.500+2	
314.	203.	8.	7.	3.	00	7.1	7.000+2	
257.	179.	5.	5.	-0.	09	11.9	7.500+2	
202.	149.	3.	3.	-2.	08	15.8	8.000+2	
150.	152.	1.	1.	-1.	12	21.0	8.500+2	

16